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EDITORIAL

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From the 21st until the 23rd of November 2006, the largest meeting of the European Commission for the announcement of its new research programme, the framework programme 2007–2011, was held in Helsinki, Finland. As part of this meeting many workshops were held, amongst which was the workshop "Haptex'06: Advanced Haptics". For this workshop the best researchers in haptics were invited to present their projects and research. We have invited several selected presenters to submit a paper to The Visual Computer. Together with one regular paper these five papers on haptics research are presented in this issue.

Prof. Cugini and his colleague from Politecnico di Milano, Italy, write about "touch and design". They present the results of a research project aiming at developing haptic tools for virtual shape modelling.

In the next paper Prof. Bergamasco from Scuola Superiora S. Anna in Pisa, Italy, discusses the various projects he and his colleagues are involved in for European projects as Haptex and Enactive. The paper deals with high performance haptic devices for force rendering in textile exploration. Their work focuses on the haptic device design and describes how demanding requirements can be met by integrating a force sensor on a high performance device to achieve closed loop control.

In the third paper Jerôme Perret from Haption and his colleagues from INRIA/IRISA and CLARTE present novel interfaces and interaction techniques for human-scale haptics. They investigate hardware solutions, with the design of devices offering a large workspace, as well as software solutions, with the description of a new interaction paradigm.

Prof. Moustapha Hafez from the Commissariat à l'Énergie Atomique (CEA) talks about tactile interfaces and their technologies, applications and challenges in the next paper. Potential applications include virtual training for surgeons, remotely touching materials via internet, automotive industry, as well as active interfaces for the blind, and sensory substitution devices.

Carsten Preusche from the DLR Institute of Robotics and Mechatronics in Wessling, Germany, and his colleague speak about current and future aspects of haptics and telerobotics, focusing on control research. Making it impossible for a human operator to distinguish between operating in a local or distant environment is the ultimate goal for a telerobotic system. Telerobotic systems can now be found in numerous different application fields among which are microassembly, surgery or even in space.

The last paper is a regular submission in which Dr. Keving McDonnell from Dowling College and his colleague Hong Qin from Stony Brook speak about a novel framework for physically based sculpting and animation of free-form solids. They propose a combination of finite element models with subdivision solid geometry that is well suited for practical use in interactive sculpting and animation.

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Editor-in-chief The Visual Computer